Koch, Kristine

From: Jennifer Woronets <jworonets@anchorqea.com>
Sent: Friday, February 28, 2014 3:14 PM
To: Humphrey, Chip; Koch, Kristine
Cc: Carl Stivers; Amanda Shellenberger; Jim McKenna (jim.mckenna@verdantllc.com); Bob Wyatt; Patty Dost; Jennifer Woronets
Subject: FW: FS Issue 3.3.1 - Expanded Discussion of BaPEq RAL Application

Chip, Kristine,

Please see below from Carl.

Thank you,
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From: Carl Stivers
Sent: Friday, February 28, 2014 3:08 PM
To: Jennifer Woronets
Cc: James McKenna; Amanda Shellenberger; Bob Wyatt; Patty Dost
Subject: RE: FS Issue 3.3.1 - Expanded Discussion of BaPEq RAL Application

Chip and Kristine –

Per the FS Revision Process Matrix the LWG is providing an expanded discussion of the LWG's current technical position regarding the BaPEq RAL application, which is Issue 3.3.1 in the matrix. Our intent here is to clearly explain our technical position to support further discussions in the 13-Mar-14 meeting on RALs. However, as with all these discussions, these are informal write-ups at this point and should not be interpreted as "etched in stone" positions. Our goal here is to fully understand whether there is in fact a disagreement and work with EPA to determine a technical resolution that avoids informal or formal dispute, if possible.

In order to frame-up this issue we have attempted to summarize EPA's positions. Obviously, if we did not accurately capture EPA's positions please let us know.

EPA is proposing that the BaPEq RALs be applied to the navigation channel (as well as the rest of the Site) for the purposes of RAL mapping in the revised FS. In the Draft FS, the BaPEq RALs were only applied along the shorelines outside the navigation channel. It is worth noting that EPA has not yet determined whether to revise the SMAs based on any or all of EPA's proposed RAL changes. If EPA decides to not revise the SMAs for the revised FS, this may mostly resolve the issue of BaPEq RAL application.

EPA indicated recently that because RALs are not risk-based concentrations, they apply everywhere at the Site. However, per the draft FS (and other similar feasibility studies presenting RALs, like the Duwamish) RALs are developed through an evaluation of how well and when they may achieve risk-based levels and any identified ARARs

(i.e., PRGs). Section 4 of the draft FS is mostly devoted to evaluating how well the range of RALs meets the relevant PRGs available at that time. This evaluation includes analyses of SWACs over spatial scales and areas that are consistent with the risk assessments and the PRGs that are back calculated using equations from those assessments.

By including the navigation channel in mapping of COC RALs, the evaluation of whether the PRGs are met over time will no longer be consistent with the risk assessment methods used to develop the PRGs. Specifically, if an exposure scenario resulting in unacceptable risk for a particular chemical does not exist or apply to a particular area of the Site, there is no logical or technical basis to develop a RAL for that chemical for that area. Put another way, if there is no unacceptable risk from a chemical in a particular area, there is no need for remediation of that chemical in that area. Consequently, to determine whether the BaPEq RAL should be applied in the navigation channel, the BaPEq risks present there need to be first examined as discussed in the remainder of this email.

The exposure scenarios (clam consumption and sediment direct contact) that were originally represented by the human health PRGs for cPAHs in the Draft FS do not apply to the navigation channel. Specifically, per EPA agreements for the Draft FS, the clam consumption scenario only applies to shoreline areas down to an elevation of 5.1 feet NAVD88 (ordinary low water elevation), and tribal fisher sediment direct contact scenario applies to shoreline areas outside the navigation channel. Thus, based on these exposure assumptions consistent with the BHHRA methods and findings, there is no need for BaPEq remediation in the navigation channel.

EPA's proposal of the new fish consumption BaPEq PRG would hypothetically add a new human health exposure scenario that could apply to the entire Site (i.e., including the navigation channel), which is a significant concern to the LWG. Without detailing our concerns about any new BaPEq fish consumption PRG here, we have very strong technical concerns about derivation of a PRG and application of a RAL to the navigation channel based on that PRG.

Finally, the EPA-approved BERA identified ecological benthic community risks from PAHs that occur in and are applicable to the navigation channel (as well as other areas of the Site). These risks were evaluated in the Draft FS using the methodology developed collaboratively by LWG and EPA to identify so called Comprehensive Benthic Risk Areas (CBRAs). PAHs are addressed in the CBRA evaluation through a multiple lines of evidence (LOE) approach, including the results of sediment toxicity bioassays and the use of site-specific sediment quality values for PAHs and other chemicals derived from multi-variable statistical models. CBRAs were identified in various areas of the Site including in some portions of the navigation channel where elevated PAH concentrations exist, and these areas will be actively remediated exactly analogous to a RAL-based approach. Consequently, there is no need to use BaPEq RALs because these benthic PAH risks in the navigation channel are already being evaluated for active remediation. To use BaPEq RALs in addition to the CBRA determinations would add a new approach to identifying benthic active remediation areas that is inconsistent with and contradictory to the CBRA approach that was previously developed by EPA and LWG.

Thanks.

Carl

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